

REMARKS

The Examiner's reconsideration of the application is requested in view of the amendments above, attachment hereto and comments which follow.

Taking the matters raised by the Examiner in turn, an appropriate IDS is submitted herewith or, if not filed on the date of the filing of this Response, will be filed very shortly thereafter.

Regarding the drawings, amended Figure 1 is attached hereto for approval in order to depict what the Examiner has requested in numbered section 3 of the Office Action. The specification has been appropriately amended to conform to the amended drawing. Approval is requested, and the amended drawing will then be obtained in a formal form.

The claims objections noted in numbered sections 4 and 5 of the Office Action have been corrected above.

In numbered sections 6 through 9 of the Office Action, the Examiner has rejected claims 1-16 and 24 under 35 U.S.C. §112 as being indefinite. Reconsideration is requested, since it is believed that the rejection is in error.

The language "coarser mesh", "fine mesh" and "coarse mesh" refer to the mesh size, following the normal convention in the art, and as explained in the specification, particularly in the discussion on page 2, in the fifth paragraph. The mesh is the number of strands per inch. It is submitted that the claim language is quite definite and no changes are needed.

In reviewing the specification, two minor errors were noted, and appropriate changes have been made to page 2 and page 3 of the specification to correct the errors. No new matter has been added in the correction of the obvious errors.

In numbered sections 11 and 12 of the Office Action, the Examiner has rejected the claims of the application under 35 U.S.C. §103 on the basis of obviousness. Reconsideration is requested.

The Examiner relies on three cited references: US 4,954,268 (Just), US 4,728,422 (Bailey), which corresponds to EP 0169698 which is the fifth reference cited in the International Search Report, and US 5,221,008 (Derrick) which is the third reference cited in the International Search Report.

Just concerns a rotary pressure filter for cellulose ethers that operates at high pressures and temperatures (column 1 lines 36 to 37). The Just device uses a multi-layer filter (as shown in Figure 2) with the layers having different wire thicknesses and mesh sizes. The filter includes a filter cloth 10 with protective meshes 9 and 11 on either side and a supporting mesh 12. The aim of the Just arrangement is to avoid clogging of the filtration device (column 1 line 63 to 64).

The Examiner acknowledges that Just does not include disclosure of the differential tensioning feature that is the basis of the present invention as now claimed, namely that the tension in the upper coarse mesh cloth is greater than that in the fine mesh cloth or cloths.

The Examiner also refers to Bailey, which discloses a wire mesh screen for a vibrating filter, having at least two wire mesh screens of different mesh sizes and different tensions. The aim of Bailey is for the screen to be self cleaning (column 2 lines 35 to 37 and column 3 lines 55 to 57). In Bailey the supporting screen of coarser mesh has a greater tension than the upper and lower cloth screens above it (claim 1). There is additional disclosure relating to tension in corresponding EP 0169698. In particular, the tension in the screens reduces progressively from the bottom to the top screen (see page 10 paragraph 3 and claim 15). Thus the differential tensioning of Bailey differs from the differential tensioning of the present invention, where the tension in the additional coarse mesh cloth is greater than that in the fine mesh cloth or cloths.

In the third paragraph on page 7 of the action, the Examiner expresses the view that it would have been obvious to one of ordinary skill in the art to modify the Just system by adopting the differential tensioning of Bailey to produce a filtering system with self cleaning ability, with the implication that the present claims would therefore have been obvious. This is believed to be in error and reconsideration is requested. Firstly, adopting the

differential tensioning disclosed in Bailey would not result in the present invention: the differential tensioning used is different as explained above. Further, differential tensioning is adopted for reasons other than self-cleaning, and instead brings the benefit of greater solids conveyance, i.e. the speed and ease with which the solids are conveyed along the mesh towards the discharge end of the screen. Greater mesh tension in the additional coarse mesh cloth acts to transport abrasive solids more quickly, thus reducing their exposure to the adjacent fine mesh cloth. Thus there is less likelihood of the particles being able to migrate on to the finer mesh cloth, which could then be more easily damaged. Another benefit results from the so-called "piggy-back" effect, whereby large particles sometimes also carry smaller particles along the screen to the discharge end without the smaller particles contacting the fine mesh. The shorter residence time on the screen resulting from applicant's differential tensioning means that the smaller particles being piggy-backed are less likely to find their way onto the fine mesh cloth. These effects are not in any way derivable or predictable from the prior art disclosures.

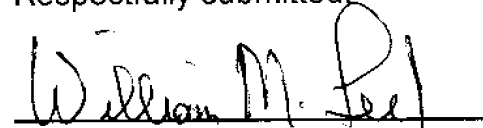
In section 12 of the action, the Examiner has presented a similar obviousness argument based on Derrick and Bailey. Derrick concerns a vibratory screen with a multi-screen arrangement of different mesh sizes (abstract). Column 6 lines 8 to 10 refers to the uppermost screen 27 protecting screen 26 from abrasion by relatively large particles. There is no disclosure in Derrick of differential tensioning, and the Examiner again considers that it would have been obvious to modify Derrick by adopting the differential tensioning of Bailey to produce a self-cleaning arrangement (page 10 paragraph 3 of the action).

In order to not unduly lengthen this Response, the explanation and arguments presented immediately above apply equally to the combination of Derek and Baily. The claims are submitted to distinguish from this combination for the same reasons as explained immediately above.

In view of the foregoing, it is submitted that the claims distinguish from, and are allowable over, the prior art references cited by the Examiner, whether considered individually or in combination of their teachings. The Examiner's further and favourable reconsideration of the application is therefore urged.

October 10, 2007

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William M. Lee, Jr.", written over a horizontal line.

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